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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/735,908	12/16/2003	Seung-Do Han	P24708	3880

7055 7590 12/08/2006

GREENBLUM & BERNSTEIN, P.L.C.
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RESTON, VA 20191

EXAMINER

NGUYEN, TRAN N

ART UNIT PAPER NUMBER

2834

DATE MAILED: 12/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/735,908

Applicant(s)

HAN ET AL.

Examiner

Tran N. Nguyen

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/22/06.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 10-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 10-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Double Patenting

The non-statutory double patenting rejection, whether of the obviousness-type or non-obviousness-type, is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent. *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); and *In re Goodman*, 29 USPQ2d 2010 (Fed. Cir. 1993).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(b) and © may be used to overcome an actual or provisional rejection based on a non-statutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.78(d).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 10-31 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over **claims 1, 19-20, 28-30, 40-41, 47-48 of U.S. Patent 6,894,412 B2 to Han et al**, in view of **Kawai (JP-3-082350A)** or **Nakayama (JP-60-134752A)**

Claims 1, 19-20, 28-30, 40-41, 47-48 of USP 6,894,412 to Han et al, are similar to claims 1, 10-31 of this application.

Both the patent and the present application recites a single phase induction motor comprising: a stator installed at an inner circumferential surface of a motor body, the stator on which a plurality of coils are wound; a rotor rotatably installed at a center portion of the stator and provided with a rotation shaft at a center thereof; and

a magnet unit, i.e. the patent's recited first rotor with hollow permanent magnet, freely and rotatably installed between the stator and the rotor with an air gap, wherein the first rotor is fixed to a first rotor cup-shaped support member, i.e., a configuration shaped like a cup with an open, a closed end and a cylindrical body between the open and the closed ends, and wherein the first rotor and the first rotor support member are formed of a single body of magnetic material, i.e., the rotor cup-shaped supporter and the magnet are integrally formed as a single body.

The only differences are as the following recitation in the claimed invention:

(a) the cup-shaped supporter and the first rotor, i.e., the magnet unit, being integrally injection molded;

(b) the thickness of the yoke is 0.2-0.6 mm;

(c) the bearing is a ball bearing or an oilless bearing type.

Regarding the limitations of the cup-shaped supporter and the first rotor, i.e., the magnet unit, being integrally injection molded, **Kawai (figs 1-4), or Nakayama (figs 1-6)** as alternate prior-art, discloses a rotor magnet and yoke being formed integrally injection molded with the support for the purpose of reducing manufacturing cost due to machinery process of each part in the rotor unit, as well as reducing a clearance between the inner periphery of a magnet and the outer periphery of a rotor in order to improve the rotor accommodation as well as magnetic interference.

Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the motor by provide the magnet unit is coupled to a supporter that is integrally injection-molded at one side of the magnet unit, as taught by either Kawai or Nakayama. Doing so would reduce manufacturing cost due to machinery process of each part in the rotor unit and improve a clearance between the inner periphery of a magnet and the outer periphery of a rotor in order to enhance the rotor accommodation as well as magnetic interference.

Regarding the limitations of the yoke's thickness between 0.2-0.6mm, those skilled in the art would understand that magnet rotor provided with a yoke is well known in the art, the yoke is for mechanically protecting the magnet as well as for serving as a magnetic flux return means when it is made of permeable magnetic material. It would have been obvious to one having ordinary skill in the art at the time the invention was made to configure the yoke with the thickness of 0.2-0.6mm. Doing so would ensure an appropriate fit of the rotor within the accommodating space while maintaining the yoke's function of mechanical support for the magnet and/or magnetic flux return means thereof; also, such modification has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

Regarding the limitations of the bearing is a ball bearing or a oilless bearing type, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ either ball bearing or oilless bearing because these are well known bearing types for rotatably supporting rotary elements in rotating electric machines.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Communication

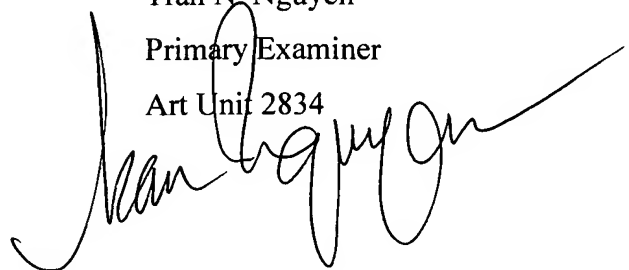
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tran N. Nguyen whose telephone number is 571-272-2030. The examiner can normally be reached on 7:00 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on 571-272-2044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. (Note: Use this Central Fax number 571-273-8300 for all official response.)

Do **not** use the Examiner's RightFax number without informing the Examiner first because, according to the USPTO policy, any document being sent via RightFax is treated as unofficial response and will not be officially dated until it is routed to the Central Fax.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Tran N. Nguyen
Primary Examiner
Art Unit 2834

A handwritten signature in black ink, appearing to read 'Tran N. Nguyen', is written over the printed name and title.